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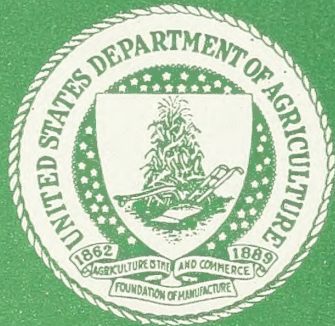
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A SURVEY OF THE AP PALACHIAN REGION //

Submitted by

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## A SURVEY OF THE APPALACHIAN REGION

For some time the area generally known as the Appalachian Region has been recognized as a definite economic problem area. In periods of widespread economic depression, the residents of this area have been adversely affected more than those in other parts of the United States. Even when prosperity prevails in the national economy, the economy of much of the Appalachian Region remains semidepressed. Declines in many of the Region's economic activities, especially coal mining, have been at least partially responsible for these conditions.

The objectives of this report are:

1. Define the Appalachian Region.
2. Point out significant changes that have occurred over the past ten years in the agricultural and other important economic sectors. Point out population changes that have taken place.
3. Give some indication of the problems that have arisen during this time period.

### The Appalachian Region

Extending from northern Alabama to southern New York, the Appalachian Region consists of the geographic entity known as the Appalachian Mountain Range, together with the adjacent plateaus, valleys, and foothills. Since there exists no generally accepted Appalachian Region with well defined boundaries, it was necessary to develop from existing data an area that would include a major portion of the geographic Appalachian Range.

Most of the available reports are concerned with only the southern portion of the Appalachians. The southern part is generally regarded as that portion extending from northern West Virginia to northern Alabama. However, two reports are available that include the entire Appalachian Range.





For this report, we examined five studies. In examining the various reports, one will find that there are considerable differences in the area covered by this term, yet, at the same time, there are many similarities.

The earliest survey of Appalachia we examined was conducted by John C. Campbell in 1921.<sup>1/</sup> Campbell selected a maximum number of counties for study, 210, on the basis of problems then encountered. These counties are located in 9 states. Campbell suggested that the determination of rigid and accurate boundaries to the Region was a difficult task. The Southern Appalachian Region as determined by Campbell is presented in Figure 1.

Another early study, also of the Southern Appalachians, was conducted by the United States Department of Agriculture in 1935.<sup>2/</sup> The topography insert map by Narschner shows a larger area than shown in most studies. This study embraced 239 counties located in 9 states. The Region as defined in this study is shown in Figure 2.

In the Southern Appalachian Region<sup>3/</sup> the census defined state economic areas were used as the component parts of the Region. Since only complete state economic areas were used, many counties were eliminated from the area which were included in other studies. By deleting the fringe counties, the Region was reduced to 19 state economic areas. This area includes 190 counties in 7 states extending from northern Alabama and Georgia to northern West Virginia. This delineation is presented in Figure 3.

<sup>1/</sup>Campbell, John C., 1921. The southern highlander and his homestead. Russell Sage Foundation, New York.

<sup>2/</sup>U.S. Dept. Agr., 1935. Economic and social problems of the southern appalachians. Bureau of Agricultural Economics, Bureau of Home Economics, U.S. Forest Service. MP No. 205. Washington.

<sup>3/</sup>Ford, Thomas A. (ed.) 1962. The southern appalachian region: a survey. University of Kentucky Press, Lexington.





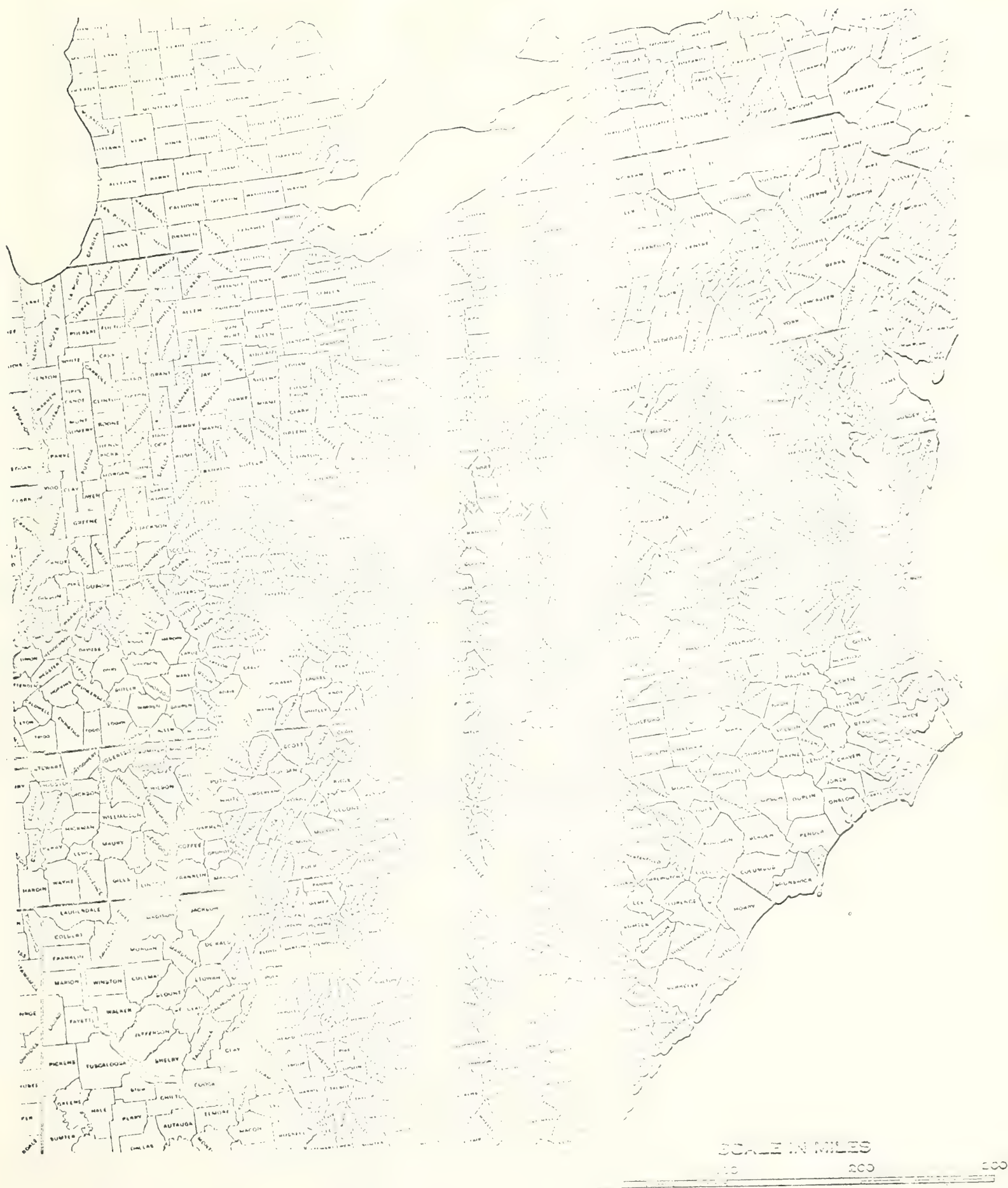


Figure 1. The Southern Appalachian Region as outlined by John C. Campbell, 1921.











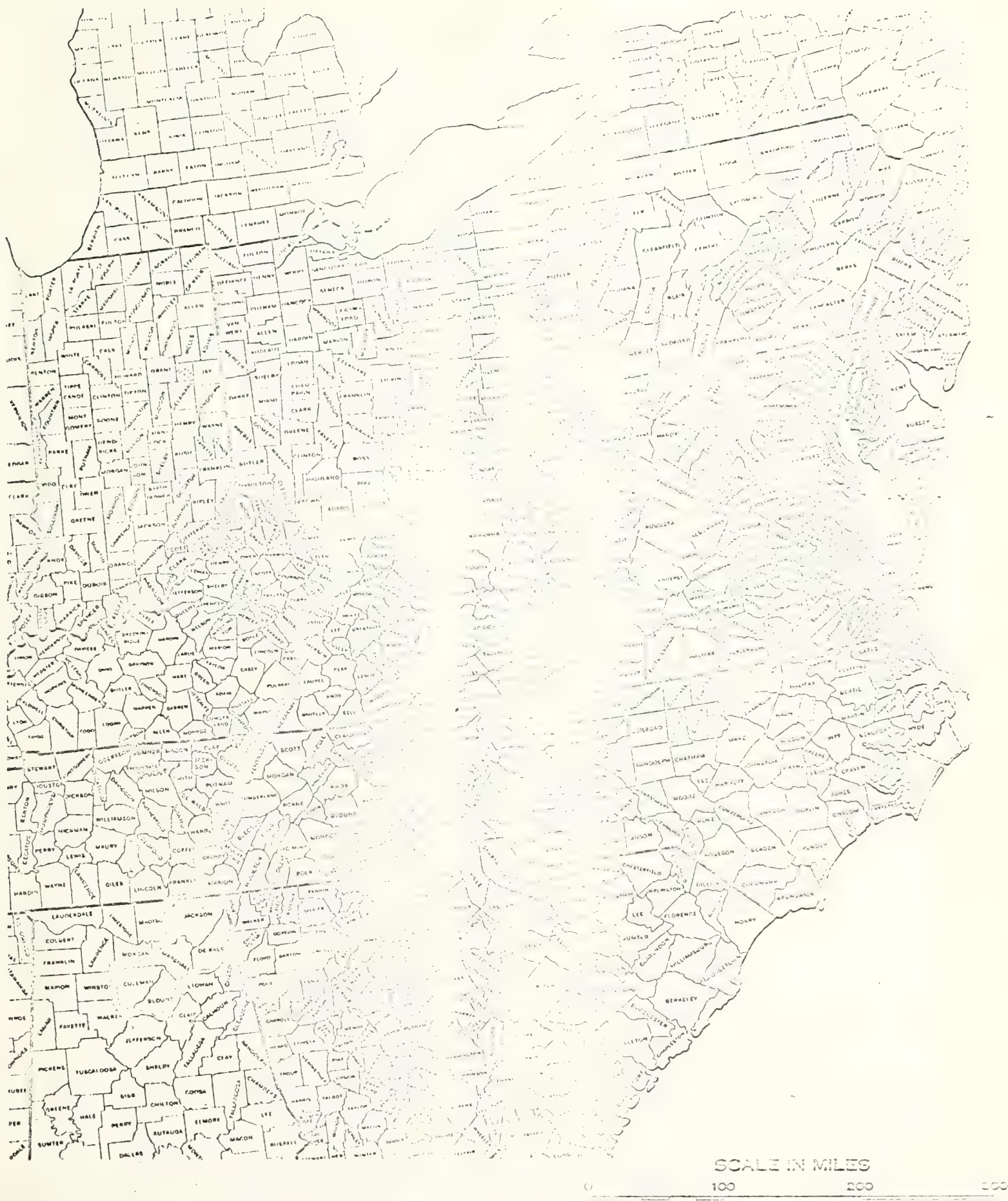


Figure 3. The Southern Appalachian Region as defined in the study, *The Southern Appalachian Region*, Edited by Thomas A. Ford, University of Kentucky Press, 1962.





In its watershed projects work, the Soil Conservation Service has outlined an area described as the Appalachian region. There is some difficulty in using this delineation since the boundary lines do not correspond to county lines. However, their general location is presented in Figure 4.

Figure 5 indicates the Appalachian Region as determined by the Conference of Appalachian Governors in 1962. This delineation includes 284 counties located in 8 states. These states range from Alabama to Pennsylvania. However, part of the states of Georgia, New York, and Ohio were not included as was the case in the Soil Conservation Service delineation.

In order to determine a region with identifiable boundaries, the areas presented in Figures 1 through 5 were analyzed and synthesized into an area composed of 369 counties. These counties are located in 11 states. In our analysis it was assumed that the minimum area should include all counties designated by the Conference of Appalachian Governors. In addition, the Soil Conservation Service delineation and the area described in the Southern Appalachian Region were given much consideration.

Figure 6 shows the Appalachian Region as it has been defined for the purpose of this report. A list of counties is presented in Table 1. We do not claim that this delineation is the true or best possible delineation that could be made. It contains, however, most of the areas that have previously been considered to be part of the Appalachian Region and it does not contain any counties that have never been considered a part of the Region.

#### Characteristics of the Appalachian Region

There is a tendency to think of this extensive Region as essentially homogeneous. However, the Region is characterized by considerable diversity of conditions. This diversity is a factor of great importance in planning economic adjustments for the entire Region or for segments of the Region.





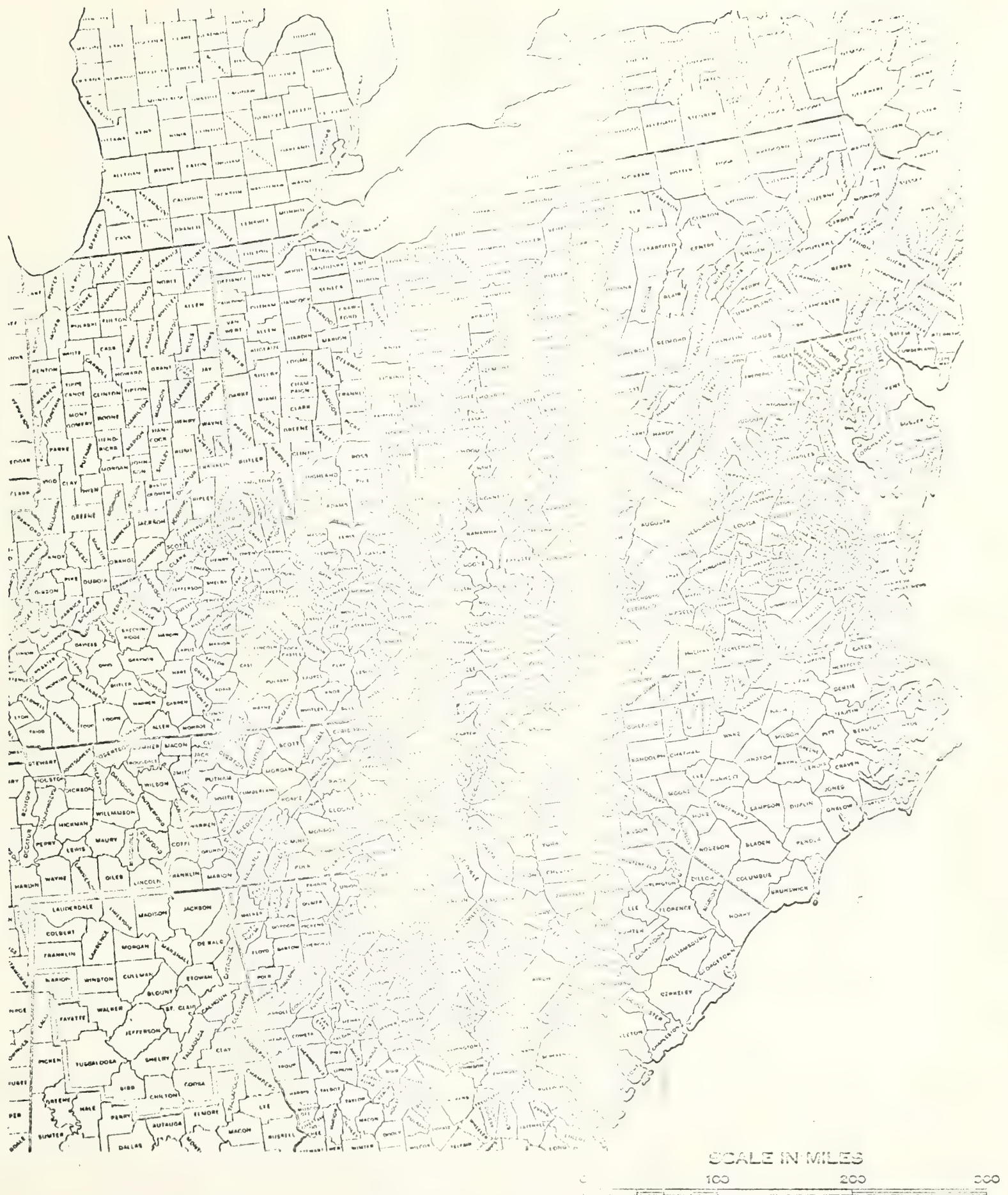


Figure 4. The Appalachian Region as defined by the Soil Conservation Service.





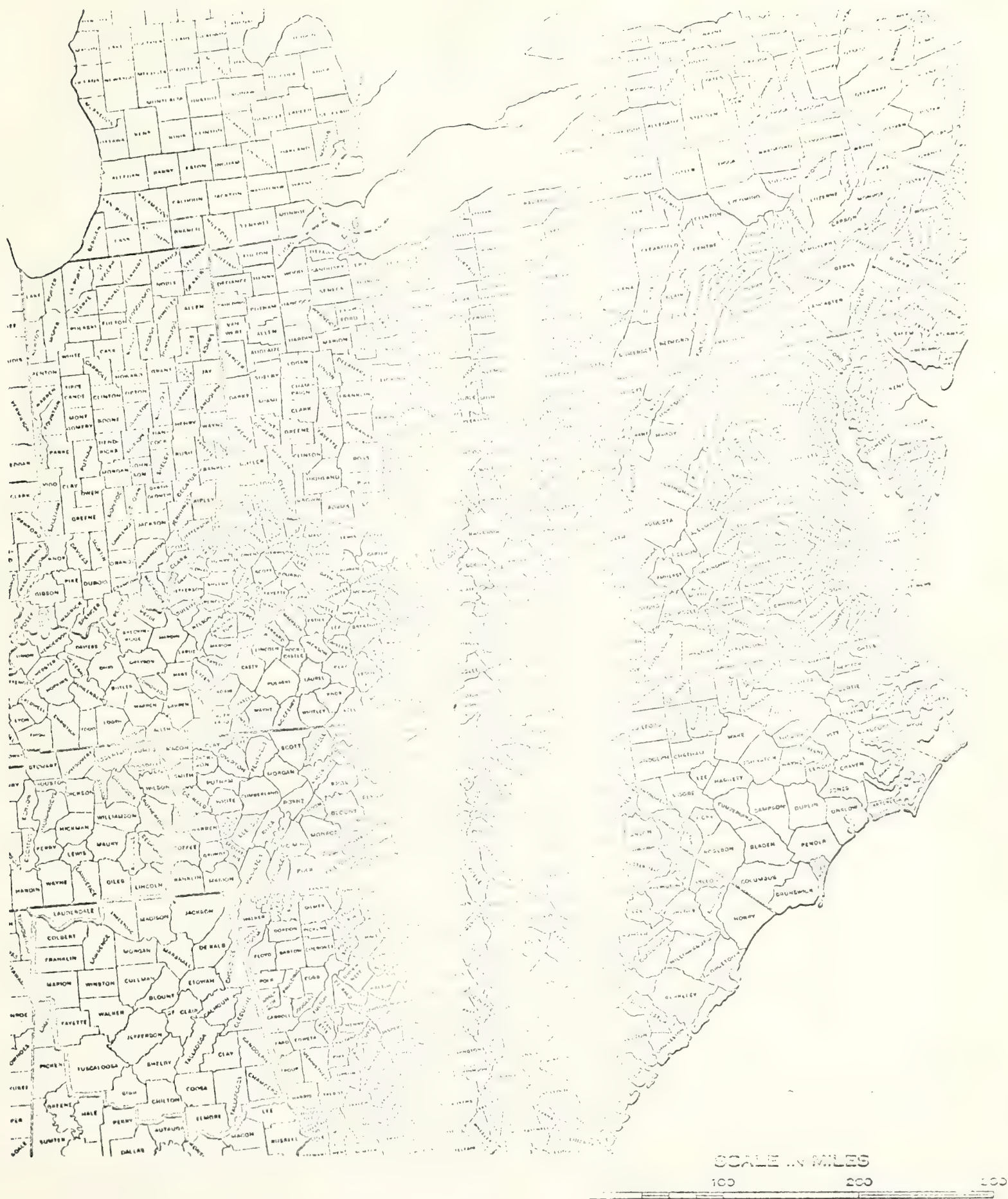


Figure 5. The Appalachian Region as defined by the Conference of Appalachian Governors, June, 1961.





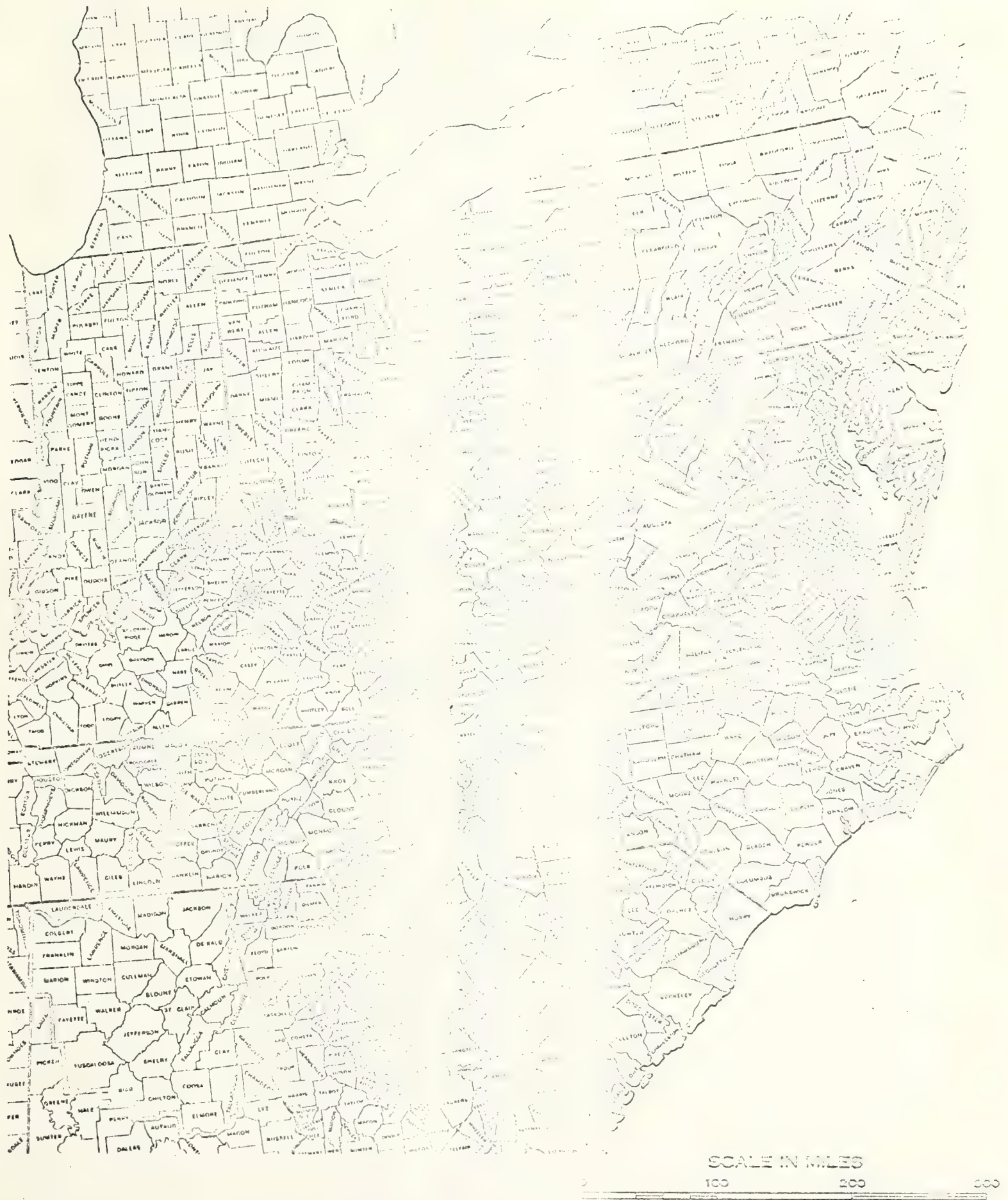


Figure 6. The Appalachian Region





Table 1. Counties and States in the Appalachian Region

**A. Alabama (32 counties)**

1. Bibb
2. Blount
3. Calhoun
4. Chambers
5. Cherokee
6. Chilton
7. Clay
8. Cleburne
9. Colbert
10. Coosa
11. Cullman
12. De Kalb
13. Elmore
14. Etowah
15. Fayette
16. Franklin
17. Jackson
18. Jefferson
19. Lawrence
20. Limestone
21. Madison
22. Marion
23. Marshall
24. Morgan
25. Randolph
26. St. Clair
27. Shelby
28. Talladega
29. Tallapoosa
30. Tuscaloosa
31. Walker
32. Winston

**B. Georgia (20 counties)**

1. Bartow
2. Catoosa
3. Chattooga
4. Dade
5. Dawson
6. Fannin
7. Floyd
8. Gilmer
9. Gordon
10. Habersham

11. Lumpkin
12. Murray
13. Pickens
14. Polk
15. Rabun
16. Towns
17. Union
18. Walker
19. White
20. Whitfield

**C. Kentucky (46 counties)**

1. Adair
2. Bath
3. Bell
4. Boyd
5. Breathitt
6. Carter
7. Casey
8. Clay
9. Clinton
10. Cumberland
11. Elliott
12. Estill
13. Fleming
14. Floyd
15. Garrard
16. Greenup
17. Harlan
18. Jackson
19. Johnson
20. Knott
21. Knox
22. Laurel
23. Lawrence
24. Lee
25. Leslie
26. Letcher
27. Lewis
28. Lincoln
29. McCreary
30. Madison
31. Magoffin
32. Martin
33. Menifee
34. Montgomery

35. Morgan
36. Owsley
37. Perry
38. Pike
39. Powell
40. Pulaski
41. Rockcastle
42. Rowan
43. Russell
44. Wayne
45. Whitley
46. Wolfe

**D. Maryland (3 counties)**

1. Allegany
2. Garrett
3. Washington

**E. North Carolina (27 counties)**

1. Alleghany
2. Alexander
3. Ashe
4. Avery
5. Buncombe
6. Burke
7. Caldwell
8. Cherokee
9. Clay
10. Cleveland
11. Graham
12. Haywood
13. Henderson
14. Jackson
15. McDowell
16. Macon
17. Madison
18. Mitchell
19. Polk
20. Rutherford
21. Stokes
22. Surry
23. Swain
24. Transylvania





25. Watauga
26. Wilkes
27. Yancey

#### F. New York (18 counties)

1. Allegany
2. Broome
3. Cattaraugus
4. Chautauqua
5. Chemung
6. Chenango
7. Cortland
8. Delaware
9. Greene
10. Livingston
11. Otsego
12. Schuylar
13. Steuben
14. Sullivan
15. Tioga
16. Tompkins
17. Ulster
18. Wyoming

#### G. Ohio (23 counties)

1. Adams
2. Athens
3. Belmont
4. Carroll
5. Columbiana
6. Coshocton
7. Gallia
8. Guernsey
9. Harrison
10. Hocking
11. Holmes
12. Jackson
13. Jefferson
14. Lawrence
15. Mahoning
16. Meigs
17. Monroe
18. Morgan
19. Muskingum
20. Noble
21. Perry
22. Pike
23. Ross

28. Scioto
29. Trumbull
30. Tuscarawa
27. Vinton
28. Washington

#### H. Pennsylvania (59 counties)

1. Allegheny
2. Armstrong
3. Beaver
4. Bedford
5. Berks
6. Blair
7. Bradford
8. Butler
9. Cambria
10. Cameron
11. Carbon
12. Centre
13. Clarion
14. Clearfield
15. Clinton
16. Columbia
17. Crawford
18. Cumberland
19. Dauphin
20. Elk
21. Erie
22. Fayette
23. Forest
24. Franklin
25. Fulton
26. Greene
27. Huntingdon
28. Indiana
29. Jefferson
30. Juniata
31. Lackawanna
32. Lawrence
33. Lebanon
34. Lehigh
35. Luzerne
36. Lycoming
37. McKean
38. Mercer
39. Mifflin
40. Monroe
41. Montour <sup>Co</sup>
42. Northampton
43. Northumberland

44. Perry
45. Pike
46. Potter
47. Schuylkill
48. Snyder
49. Somerset
50. Sullivan
51. Susquehanna
52. Tioga
53. Union
54. Venango
55. Warren
56. Washington
57. Wayne
58. Westmoreland
59. Wyoming

#### I. Tennessee (49 counties)

1. Anderson
2. Bladsoe
3. Blount
4. Bradley
5. Campbell
6. Carter
7. Claiborne
8. Clay
9. Cocke
10. Colf
11. Cumberland
12. DeKalb
13. Fentress
14. Franklin
15. Grainger
16. Greene
17. Grundy
18. Hamblen
19. Hamilton
20. Hancock
21. Hawkins
22. Jackson
23. Jefferson
24. Johnson
25. Knox
26. Loudon
27. McMinn
28. Macon
29. Marion
30. Meigs
31. Monroe
32. Morgan



33. Overton
34. Pickett
35. Polk
36. Putnam
37. Rhea
38. Roane
39. Scott
40. Sequatchie
41. Sevier
42. Smith
43. Sullivan
44. Unicoi
45. Union
46. Van Duren
47. Warren
48. Washington
49. White

#### J. Virginia (32 counties)

1. Alleghany
2. Augusta
3. Bath
4. Bland
5. Botetourt
6. Buchanan
7. Carroll
8. Clarke
9. Craig
10. Dickenson
11. Floyd
12. Frederick
13. Giles
14. Grayson
15. Highland
16. Lee
17. Montgomery
18. Page
19. Patrick
20. Pulaski
21. Roanoke
22. Rockbridge
23. Rockingham
24. Russell
25. Scott
26. Shenandoah
27. Smyth
28. Tazewell
29. Warren
30. Washington
31. Wise
32. Wythe

#### K. West Virginia (55 counties)

1. Barbour
2. Berkeley
3. Boone
4. Braxton
5. Brooke
6. Cabell
7. Calhoun
8. Clay
9. Doddridge
10. Fayette
11. Gilmer
12. Grant
13. Greenbrier
14. Hampshire
15. Hancock
16. Hardy
17. Harrison
18. Jackson
19. Jefferson
20. Kanawha
21. Lewis
22. Lincoln
23. Logan
24. McDowell
25. Marion
26. Marshall
27. Mason
28. Mercer
29. Mineral
30. Mingo
31. Monongalia
32. Monroe
33. Morgan
34. Nicholas
35. Ohio
36. Pendleton
37. Pleasants
38. Pocahontas
39. Preston
40. Putnam
41. Raleigh
42. Randolph
43. Ritchie
44. Roane
45. Summers
46. Taylor
47. Tucker
48. Tyler
49. Upshur
50. Wayne
51. Webster

52. Wetzel
53. Wirt
54. Wood
55. Wyoming





Even though economic and social conditions are different in different sectors of the Region, there are, nevertheless, certain similar features that are characteristic of large segments of the Region. Following is a discussion of some of these similar features. After the similar feature characteristics are presented, some of the diverse conditions will be discussed.

Perhaps the Region's most distinctive unifying feature is its geographic unity. The Appalachian Mountain Range is composed of several smaller mountain ranges, valleys, and plateaus. The Blue Ridge Mountain Range, lying in the eastern portion of Appalachia, extends from northern Georgia, up through North Carolina, Virginia, Maryland and into southern Pennsylvania. The Great Smoky Mountain Range lies west of the Blue Ridge and extends up through Tennessee, North Carolina, and into southern Virginia. The massive Allegheny Front extends from northern Alabama into northern Pennsylvania. To the west of this Front lies the Cumberland Plateau, located in Tennessee and Kentucky, and the Allegheny Plateau, located in Ohio, West Virginia and Pennsylvania. The Great Valley extends down through eastern Pennsylvania, central Maryland, and western Virginia and to the east of the Blue Ridge lies the Piedmont Plateau.

This mountainous terrain creates conditions of difficult accessibility. Its north-south orientation tends to make for difficult east-west travel. The mountainous structure also limits the amount of level, buildable land. This factor may tend to discourage industry from locating in the area.

The existence of a large portion of the nation's bituminous and anthracite coal resources is a second regional feature. However, there are large sectors in which no coal deposits are found. The mechanization of the coal mining industry and the subsequent unemployment of miners has left many areas in serious economic depression. This unemployment has had depressing second round effects





on the service industries located in these areas. As a consequence, additional loss of unemployment has resulted.

The high rate of unemployment and underemployment is a third characteristic of the Region. An examination of employment data indicates the most of the Region's counties have a high rate of unemployment. These data will be examined in a later section.

Non-commercial agriculture is a fourth factor characteristic of the Region. Even though there are some efficient operations located in the Region, most farms are small, undercapitalized units yielding low incomes to their owners. The Region's agriculture consists largely of intensive cultivation of steep slopes and narrow valleys. The scarcity of level agricultural land, the large losses of topsoil through erosion of the steep hillsides, and the relatively short growing season are some factors which have contributed to a continuous decline in the Region's agricultural economy.

Although the above features are characteristic of much of Appalachia, they are not uniform throughout the Region. The diversity of these features can have a significant effect upon economic development within the Region. Following are some of the differences found within the Region.

There are significant economic differences in the Region. As previously stated, coal mining, which characterizes much of the area, is nonexistent in many sectors. Furthermore, in a few localities gas and oil resources are abundant, while in most areas these resources are absent. Agriculture also differs in various sectors. This difference is due to variations in climate, soil, and topography. While most of the agriculture is conducted on small, hillside farms, areas like the Great Valley maintain large, highly capitalized, efficient units.

The metropolitan or urban centers of the Region also vary in composition and strength of their economies and differ greatly from the rural areas. Manufacturing





and service industries are concentrated in these centers. These industries generally provide better incomes, job opportunities, level of living, and education facilities than the mining and rural areas.

Finally, the northern sector is different from the southern part. The northern portion supports more urban centers with manufacturing and service industries, while the southern economy is more dependent on agriculture.

### **The Changing Agricultural Sector**

Although agriculture is still an important economic activity in the Appalachian Region, it is not the most important in terms of employment or income. Compared to manufacturing, construction, or service industries, fewer workers are employed in agriculture. Relative to total employment, agriculture has become less important in the last decade.

The Region's agricultural resources are inadequate to support its farm population. For the most part, Appalachian agriculture is characterized by too many people on farms with small acreages of cropland, low capitalization, and low gross farm incomes. In addition to a cropland shortage, the existing cropland is composed of such small fields that efficient use of modern machinery becomes a near impossibility.

The small, low income farm is more characteristic of the southern portion of the Region. In Maryland, New York, and Pennsylvania the farms are larger and have greater farm incomes.

The trend established in the United States over the past few years has been a reduction in farm numbers, land in farms, and harvested cropland while the average size of farm and off-farm employment has been increasing. Similar trends have developed in the Appalachian Region; however, changes were proportionally greater in the reduction of farm numbers, land in farms, and harvested cropland and proportionally less in the increase in average size of farm and off-farm employment compared to the 11 states of which the Region is a part, or to the United States





as a whole.

Following is a description of some changes that have occurred in the Region's agriculture. For the most part, changes are shown by comparing data from the 1950 and 1959 censuses of agriculture. Comparisons are made between the Appalachian counties, the states of which they are a part, and the United States. Differences within the Region are shown on supplementary maps with county delineations.

#### Number of Farms, Land in Farms, and Harvested Cropland

As shown in Table 2, the number of farms decreased by 37 percent in the Appalachian counties from 1950 to 1959. This change is slightly greater than the 31 percent decrease in the nation during the same period. There was no appreciable difference, however, between the relative change in the number of farms in the Appalachians and in the 11 contiguous states. On the other hand, there was considerable variation among the counties in the Region (see supplementary map).

Land in farms and harvested cropland acreage decreased in the nation from 1950 to 1959 by 3 and 10 percent, respectively (Table 3). In contrast to these changes, total farm acreage and harvested cropland acreage in the Region decreased by approximately 20 and 16 percent, respectively. In general the trend has been toward harvesting a smaller percentage of the total farmland. Although, this trend is not evident in the Region as a whole, a smaller percentage of the total farm land was harvested in many segments of the Region (Table 3).

The data in Table 3 compare the relative change in farm and harvested cropland acreage in the Appalachian counties of the 11 states with the entire state. As a general rule, a greater relative change occurred in both farm and harvested cropland acreage in the Appalachian counties than in the 11 contiguous states.

There was considerable variation in the relative change of both farm and harvested cropland acreage among the Appalachian counties (see supplementary maps). In addition, Table 4, which shows the number of counties by percent change in acres of cropland





harvested, shows the greatest relative changes occurred in counties in the southern states.

Table 2. Number of farms in states in the Appalachian Region, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region			Entire state		
	Farm numbers			Farm numbers		
	1950	1959	Percent change	1950	1959	Percent change <sup>b/</sup>
Alabama	112,328	58,867	-47.6	211,512	115,788	-45.3
Georgia	26,025	14,157	-45.6	198,191	106,350	-46.3
Kentucky	89,518	57,245	-36.1	218,476	150,986	-30.9
Maryland	4,761	3,281	-31.1	36,107	25,122	-30.4
North Carolina	69,347	43,114	-38.0	288,508	190,567	-34.0
New York	43,939	29,465	-32.9	124,977	82,356	-34.1
Ohio	58,928	38,952	-33.9	199,359	140,353	-29.6
Pennsylvania	118,600	79,631	-32.9	146,887	100,052	-31.9
Tennessee	104,090	73,853	-29.0	231,631	157,688	-31.9
Virginia	59,982	40,181	-33.0	150,997	97,623	-35.3
West Virginia	81,434	44,011	-46.0	81,434	44,011	-46.0
Total	768,952	482,757	-37.2	1,888,079	1,210,896	-35.9

<sup>a/</sup> Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

<sup>b/</sup> Farm numbers decreased 31.2 percent in the United States.

The average Appalachian farm in 1950 was only 88 acres in size. By 1959, the average size farm contained 113 acres. Farms in the 11 contiguous states were only slightly larger. In 1950 all farms in the 11 states averaged 97 acres and in 1959 the average had increased to 125 acres (Table 5). In contrast to the small average size farm in the Appalachian counties, farms in the United States averaged 215 acres in 1950 and 302 acres in 1959.

In addition to the small size of farm, Appalachian farms averaged only 15 acres of harvested cropland in 1959. In the same year, all U.S. farms averaged 84 acres of harvested cropland.

There was considerable variation among the counties in average farm size (see supplementary maps). In 1950 there were 18 counties with farms averaging less than 50 acres, while farms in 22 counties averaged 150 or more acres. By 1959, only 4



Table 3. Percentage change in land in farms and harvested cropland in States in the Appalachian Region, 1950 to 1959<sup>a/</sup>

State	Area in the total farms		Percent- age change 1950-1959	Land in harvested cropland		Percent- age change 1950-1959	Land in farms		Percent- age change 1950-1959	Harvested cropland		Percent- age change 1950-1959
	1959	1950		1959	1950		1959	1950		1959	1950	
	thous. acres			thous. acres			thous. acres			thous. acres		
Alabama	6,531		-27.4	1,648		-40.0	16,543		-20.8	37,153		-35.2
Georgia	1,672		-31.0	253		-47.1	19,658		-23.7	49,180		-30.7
Kentucky	5,362		-17.5	828		-27.4	17,031		-12.4	40,130		-20.6
Maryland	688		-12.2	1,492		-15.5	3,457		-14.8	14,559		-4.9
North Carolina	3,123		-23.3	534		-33.4	15,888		-17.8	47,464		-17.9
New York	5,211		-14.7	16,910		-11.1	13,489		-15.8	50,327		-13.1
Ohio	5,074		-19.2	1,356		-19.2	18,507		-11.7	97,435		-5.4
Pennsylvania	10,119		-16.3	38,487		-14.4	11,862		-16.0	48,537		-13.9
Tennessee	6,188		-13.9	1,334		-31.0	16,081		-13.2	41,164		-26.2
Virginia	4,709		-14.7	822		-21.5	13,126		-15.7	28,578		-13.8
West Virginia	6,063		-26.2	8,319		-31.7	6,063		-26.2	8,319		-31.7
Total	54,545		-19.7	71,983		-18.0	151,703		-17.0	462,844		-18.8

<sup>a/</sup>Source: U.S. Dept. of Commerce, 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

b/For the United States, farm acreage decreased 3 percent, while harvested cropland decreased 10 percent.





Table 4. Number of counties by percent change in acres of harvested cropland, Appalachian Region, 1950 to 1959<sup>a/</sup>

State	Percentage change									Total
	1.0 or larger	0.0 to -9.9	-10.0 to -19.9	-20.0 to -29.9	-30.0 to -39.9	-40.0 to -49.9	-50.0 to -59.9	-60.0 to -69.9	-70.0 or more	
Alabama			1	3	7	9	8	4		32
Georgia				3	2	7	5	2	1	20
Kentucky		3	8	11	4	8	5	4	3	46
Maryland		1	1		1					3
New York	2	5	9	2						18
North Carolina			4	6	8	4	5			27
Ohio		2	10	11	4	1				28
Pennsylvania		16	24	13	4	2				59
Tennessee			2	19	19	8	1			49
Virginia		2	6	17	4		1	2		32
West Virginia		2	6	13	15	11	4	3	1	55
Total	2	31	71	98	68	50	29	15	5	369

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

Table 5. Average size of farm in states in the Appalachian Region, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region			Entire state		
	Average size of farm (acres)		Change in average size, 1950-1959 (acres)	Average size of farm (acres)		Change in average size, 1950-1959 (acres)
	1950	1959		1950	1959	
Alabama	86.1	110.9	30.8	98.8	142.9	44.1
Georgia	93.1	118.1	25.0	129.9	154.8	24.9
Kentucky	72.6	93.7	21.1	89.0	112.8	23.8
Maryland	116.8	148.7	31.9	112.3	137.6	25.3
North Carolina	58.8	72.6	13.8	67.0	83.4	16.4
New York	139.1	176.9	37.8	128.2	163.8	35.6
Ohio	106.6	130.3	23.7	105.2	131.9	26.7
Pennsylvania	101.9	127.1	25.2	96.1	118.6	22.5
Tennessee	69.0	83.8	14.8	80.0	102.0	22.0
Virginia	92.0	117.2	25.2	103.1	134.5	31.4
West Virginia	100.9	137.8	36.9	100.9	137.8	36.9
Total	88.4	113.0	24.6	96.8	125.3	28.5

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

<sup>b/</sup>The average size farm in the United States increased from 215 to 302 acres.

counties had farms averaging less than 50 acres and farms in 82 counties averaged 150 or more acres.





### Commercial Farms

In the 1950 and 1959 agricultural censuses, farms were classified on the basis of gross farm sales as commercial farms and other farms. In general, operators of commercial farms usually obtain most of their income from the sale of agricultural products.

In both censuses, commercial farms were divided into 6 economic classes. The 1959 class intervals were different from those used in 1950, however. In general, in 1950, all farms with a value of sales of \$1,200 or more were classified as commercial. Farms with sales of \$250 to \$1,199 were also classified as commercial provided the farm operator worked off the farm less than 100 days per year and provided other income the farm family received was less than the value of farm products sold. In 1959, all farms with gross sales of \$2,500 or more were commercial. In addition, farms with sales of \$50 to \$2,499 were classified as commercial if the operator was under 65 years of age, he did not work off the farm 100 days or more per year, and other income his family received was less than the farm sales. In both censuses, the above restrictions applied only to Class VI farms. Operators of farms in Classes I through V could work off-farm more than 100 days and other income the family received could exceed the value of farm products sold.

A smaller proportion of the farms in the Appalachian Region was classified as commercial than was the case in either the 11 contiguous states or in the United States (Table 6). In 1950, 48, 61, and 69 percent of all farms were classified as commercial in the Appalachian Region, the 11 contiguous states, and in the United States, respectively. By 1959, 47, 57, and 65 percent of all farms were commercial in the Appalachians, the 11 contiguous states, and in the United States, respectively. Therefore, it seems more farmers in the



Table 6. Commercial farms in states in the Appalachian Region, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region				Entire state			
	Percent of all farms		Percent of commercial <sup>b/</sup> farms with sales less than \$2,500		Percent of <sup>c/</sup> all farms		Percent of commercial farms with sales less than \$2,500	
	1950	1959	1950	1959	1950	1959	1950	1959
Alabama	55.5	51.4	84.2	35.7	55.9	50.0	80.6	41.9
Georgia	37.6	46.7	76.6	22.0	61.7	58.3	67.6	22.7
Kentucky	43.1	47.8	77.5	51.7	61.6	57.4	64.5	31.3
Maryland	53.3	54.8	46.3	13.1	65.5	63.6	33.6	8.7
North Carolina	41.8	41.9	78.8	42.2	57.1	63.0	57.7	22.4
New York	69.5	68.6	26.2	4.8	70.4	68.9	25.2	4.8
Ohio	53.4	45.0	53.8	19.4	67.4	60.6	35.2	9.1
Pennsylvania	57.5	56.0	36.3	9.7	60.1	58.8	33.7	8.3
Tennessee	45.1	43.3	81.8	45.5	59.7	52.4	75.7	35.8
Virginia	44.2	41.8	67.8	37.6	51.7	50.7	62.0	29.6
West Virginia	28.6	28.6	69.2	39.1	28.6	28.6	69.2	39.1
Total	48.0	47.2	64.0	30.2	60.5	56.8	57.1	23.0

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

<sup>b/</sup>Class V and VI farms in 1950, Class VI in 1959.

<sup>c/</sup>Commercial farms composed 68.9 and 65.1 percent of all farms in the United States in 1950 and 1959, respectively.

<sup>d/</sup>The percent of commercial farms in the United States with sales less than \$2,500 in 1950 and 1959 was 43.7 and 14.4, respectively.

Appalachian Region depend upon off-farm work than in the surrounding area or in the nation.

In general, commercial farms with gross sales of less than \$2,500 per year are subsistence farms. Most of these farms are characterized by low capitalization and underemployment. As shown in Table 6, a larger proportion of commercial farms in the Appalachians had gross sales of less than \$2,500 compared to the 11 contiguous states, or to the United States.

There was a large decrease in the percent of commercial farms with less than \$2,500 gross sales in all areas from 1950 to 1959. However, much of this decrease was due to a definition change.





There was considerable variation among the Appalachian counties in the percent of farms classified as commercial and in the percent of commercial farms with farms sales of less than \$2,500 per year (see supplementary maps). In general, a larger percent of the farms in the northern area was classified as commercial compared to the southern region. Furthermore, a larger proportion of the commercial farms in the southern area had gross farm sales of less than \$2,500 per year.

#### Value of Farm Products Sold

The high percentage of commercial farms having farm sales of less than \$2,500 is reflected in the low average value of all farm products sold per farm. The average value sold per farm in the Appalachians in 1959 was only \$3,764 (Table 7). This was only 77 percent of the average value of all farm products sold per farm in the 11 state area, where the average was \$4,869, and was only about 40 percent of the average value per farm in the United States, where the average was approximately \$9,000 per farm.

The difference between the Appalachians and the 11 contiguous states was less per acre than per farm (Table 7). In 1959, the value of all farm products sold per acre of farm land was \$33.31 in the Appalachian Region and \$38.87 in the 11 state area. In both cases, however, the average was greater than the U.S. average where approximately \$39 worth of farm products were sold per acre of farm land.

There was considerable variation among the counties in the value of farm sales per farm and per acre. The Appalachian counties of West Virginia, which includes the entire state, had the lowest average sales per acre of farm land. In West Virginia, the average was only \$16.35. The next lowest was for the Appalachian counties of Kentucky, where the average was only \$20.95 per acre. The New York counties had the highest average amounting to \$48.64 per acre.

The Appalachian counties of Kentucky had the lowest average value of farm sales per farm with only \$1,963. The highest average value of farm sales per farm also





Table 7. Value of farm products sold for states in the Appalachian Region, 1959<sup>a/</sup>

State .	Area in the Appalachian Region			Entire state		
	Average value per farm	Average value per acre of farm land	Percent derived from livestock	Average value per farm	Average value per acre of farm land	Percent derived from livestock
	dollars	dollars		dollars	dollars	
Alabama	3,877	34.93	54.5	3,579	25.04	53.2
Georgia	5,217	44.17	84.1	5,715	30.89	53.7
Kentucky	1,963	20.95	46.4	3,431	30.42	51.2
Maryland	6,171	41.49	76.7	9,206	66.86	67.5
North Carolina	2,439	33.62	52.7	4,184	50.18	28.7
New York	8,603	48.64	81.9	9,171	56.00	73.4
Ohio	3,463	26.58	77.3	6,147	46.62	61.6
Pennsylvania	5,988	47.12	78.3	7,122	60.07	73.7
Tennessee	2,246	26.81	60.5	3,009	29.51	48.4
Virginia	3,657	31.20	77.2	4,343	32.32	57.6
West Virginia	2,254	16.35	78.5	2,254	16.35	78.5
Total	3,764	33.31	68.8	4,869	38.87	57.0

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1961. U.S. Census of Agriculture: 1959. Bureau of the Census, Washington.

occurred in the New York counties. Only in the Appalachian counties of Alabama and Georgia was the average value per farm and per acre higher than the respective state averages.

Due to the topography of the Appalachians, agriculture in this area is based primarily on livestock production. As shown in Table 7, livestock and livestock products in 1959 constituted 69 percent of the value of farm products sold in the Appalachian counties. In the 11 state area livestock accounted for only 57 percent of the total value of farm sales. Only in Kentucky was the percent of the total value of farm sales derived from livestock less in the Appalachian counties than in the state as a whole.

In general, there was an increase in livestock numbers on farms in the Appalachians from 1950 to 1959. The number of cattle and calves increased in all areas except in West Virginia ( see supplementary map ). Although the number of cattle and calves increased in some counties in West Virginia, there was a 12.5 percent decrease for the state as a whole. In the Appalachian counties of New York





and Ohio the percent increase from 1950 to 1960 was less than one percent. The percent increases in the remaining state areas were somewhat greater, however. For example, the number of cattle and calves increased in the Appalachian counties of Georgia by 44 percent and in Alabama by 20 percent.

Although the number of hogs and pigs increased in many Appalachian counties from 1950 to 1959, there were also decreases in many areas (see supplementary map). Net decreases occurred in the Appalachian counties of Maryland, New York, Ohio, Pennsylvania, Virginia, and West Virginia. Net increases occurred in the Appalachian counties of Alabama, Georgia, Kentucky, North Carolina, and Tennessee.

Poultry production diminished in many counties in the Region from 1950 to 1959 (see supplementary map). Net decrease occurred on farms in the Appalachian counties of each state except Alabama, Georgia, New York, North Carolina, and Pennsylvania. However, the increase in the number of chickens on farms was quite large in some of these areas. For example, the number of chickens increased approximately 236 percent in the Appalachian counties of Georgia.

#### Level of Living of Farm Families

The relative low economic position of farmers in many Appalachian counties is also shown in the farm operator level-of-living indexes presented in Table 8 and on supplementary maps. These indexes, which were computed on a county basis, includes five items. These items are: (1) average value of sales per farm, (2) average value of land and buildings per farm, (3) percentage of farms with telephone, (4) percentage of farms with home freezers, and (5) percentage of farms with automobiles.

The U.S. county average indexes for 1950 and 1959 were 39 and 100, respectively (Table 8). In 1950, the U.S. average was 18 points higher than the average for the Appalachians, where the average was 41. In 1959, the U.S. average was 21 points





**Table 8. Farm Operator Level-of-Living Indexes for states in the Appalachian Region, 1950 and 1959<sup>a/</sup>**  
 (U.S. County Average in 1950 59; in 1959 100)

State	Area in the Appalachian Region <sup>b/</sup>		Entire State	
	1950	1959	1950	1959
Alabama	24	70	22	65
Georgia	26	71	31	82
Kentucky	20	48	39	72
Maryland	53	96	71	113
North Carolina	22	59	32	74
New York	79	117	80	116
Ohio	57	94	75	112
Pennsylvania	68	109	70	110
Tennessee	28	68	31	71
Virginia	40	76	42	80
West Virginia	35	68	35	68
Total	41	79	44	84

<sup>a/</sup>Source: Cowbig, James D. 1962. Farm Operator-of-Living Indexes, 1950 and 1959, Economic Research Service, Stat. Bull. No. 321, USDA.

<sup>b/</sup>Indexes for areas and states are averages of county indexes, unweighted for differences in the number of farms within counties.

higher than the 79 average for the Appalachians. The Appalachian counties of Kentucky had the lowest averages for the two years. In 1950, the index average for this group of counties was only 20. In 1959, the average was only 48. Only the Appalachian counties of New York and Pennsylvania had averages above the national county averages.

Individual county averages are shown on supplementary maps. On these maps, the counties were ranked by quintile groups. All U.S. counties were considered in determining in which quintile group an Appalachian county was placed.

In 1950, most of the Appalachian counties outside the states of New York, Ohio, and Pennsylvania fell in the fourth or fifth quintile group. In contrast, most of the Appalachian counties of New York, Ohio, and Pennsylvania fell in the second or third quintile group.

In general, most Appalachian counties remained in the same quintile group in 1959. However, a block of counties in eastern and north-central West Virginia slipped from the fourth to the fifth quintile group. Furthermore, a group of counties





in Ohio fell from the third to the fourth quintile group. On the other hand, there was a relative increase in the level-of-living indexes for a few scattered Appalachian counties (see supplementary map).

#### Off-farm Employment

As would be expected in an area having low income from farming, the percentage of farm operators working off the farm and having income from nonfarm sources is high in the Appalachians (Table 9). The percentage of all farmers working off-farm 100 days or more per year increased from 32.6 in 1950 to 37.6 in 1959. Although the percentage of farmers working off-farm more than 100 days in 1959 was greater in the Appalachians than in the 11 state area and in the nation, the percentage increase in farmers working off their farms 100 days or more from 1950 to 1959 was slightly greater in the 11 state area and in the nation than it was in the Appalachian Region. The percentage of all farmers working off-farm 100 days or more increased from 26.6 in 1950 to 33.0 in 1959 in the 11 state area and from 23 in 1950 to 30 in 1959 in the nation.

The percentage working off-farm in the Appalachian counties of Alabama and Georgia increased by 13 and 12 percent, respectively, from 1950 to 1959. Although relative increases occurred in the Appalachian counties of the other states, the increases were smaller, ranging from less than one percent increase in West Virginia to an 8 percent increase in Ohio.

Many commercial farmers were engaged in nonfarm work and had incomes from sources other than the farm business. As shown in Table 10, the percentage of commercial operators working off their farms 100 days or more increased from 10 to 15 percent between 1950 and 1959. Furthermore, the percentage having income from other sources greater than farm sales increased from 12 to 15 percent (Table 11).





Table 9. Off-farm employment in states in the Appalachian Region, all farmers, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region				Entire state			
	All farmers working off-farm more than 100 days		Percent of all farmers		All farmers working off-farm more than 100 days		Percent of all farmers <sup>b/</sup>	
	1950	1959	1950	1959	1950	1959	1950	1959
Alabama	26,957	21,955	24.0	37.3	49,312	40,595	23.3	35.1
Georgia	8,396	6,270	32.3	44.3	43,449	36,425	21.9	34.2
Kentucky	24,058	15,922	26.9	28.7	43,907	40,611	21.0	26.9
Maryland	1,653	1,181	34.7	35.7	11,221	8,682	31.1	34.6
North Carolina	22,208	15,792	32.0	36.6	59,983	51,137	20.8	26.8
New York	13,702	10,528	31.2	35.5	37,937	27,946	30.4	33.9
Ohio	21,348	7,090	36.2	43.9	62,848	53,272	31.5	38.0
Pennsylvania	44,904	31,907	37.9	40.1	54,407	39,081	37.0	39.1
Tennessee	30,356	26,478	29.2	35.9	53,516	50,412	23.1	32.0
Virginia	21,969	15,500	36.6	38.6	49,188	32,202	32.6	33.0
West Virginia	35,071	19,118	43.0	43.4	35,071	19,118	43.0	43.4
Total	250,622	181,741	32.6	37.6	502,790	399,481	26.6	33.0

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

<sup>b/</sup>Twenty-three and 30 percent of all farmers in the United States worked off their farms more than 100 days in 1950 and 1959, respectively.

Table 10. Off-farm employment in states in the Appalachian Region, commercial farmers, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region				Entire state			
	Commercial farmers working off-farm more than 100 days		Percent of commercial farmers		Commercial farmers working off-farm more than 100 days		Percent of commercial farmers	
	1950	1959	1950	1959	1950	1959	1950	1959
Alabama	3,257	4,587	5.2	15.2	7,005	7,897	5.9	13.7
Georgia	870	1,752	8.9	26.5	8,907	11,028	7.3	17.8
Kentucky	2,239	2,039	5.8	7.4	8,184	9,094	6.1	10.5
Maryland	291	312	11.5	17.3	3,198	2,926	13.5	18.3
North Carolina	1,970	2,208	6.8	12.2	12,553	12,468	6.5	10.4
New York	4,487	3,632	14.7	18.0	12,311	9,517	14.0	16.8
Ohio	4,088	3,445	13.0	19.6	18,878	17,292	14.0	20.3
Pennsylvania	10,869	8,431	15.9	18.9	14,330	11,151	16.2	18.9
Tennessee	3,114	3,858	6.6	12.1	8,992	10,068	6.5	12.2
Virginia	3,262	2,278	12.3	13.5	7,631	6,314	9.8	12.8
West Virginia	2,783	2,079	12.0	16.5	2,783	2,079	12.0	16.5
Total	37,230	34,621	10.1	15.2	104,772	99,834	9.2	14.5

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.





Table 11. Farm families with other income greater than the value of farm products sold in states in the Appalachian Region, commercial farmers, 1950 and 1959<sup>a/</sup>

State	Area in the Appalachian Region				Entire state			
	Number		Percent of all commercial farmers		Number		Percent of all commercial farmers	
	1950	1959	1950	1959	1950	1959	1950	1959
Alabama	5,007	4,439	8.0	14.7	9,997	7,926	8.5	13.7
Georgia	1,436	2,066	14.7	31.3	11,837	11,527	9.7	18.6
Kentucky	2,947	2,130	7.6	7.8	9,601	8,724	7.1	10.1
Maryland	290	298	11.4	16.6	3,288	3,113	13.9	19.5
North Carolina	2,640	2,321	9.1	12.9	14,882	11,779	7.7	9.8
New York	3,996	2,939	13.1	14.3	10,705	7,783	12.2	13.7
Ohio	4,412	3,293	14.0	18.8	16,761	15,163	12.4	17.8
Pennsylvania	10,364	7,277	15.2	16.3	13,534	9,678	15.3	16.4
Tennessee	6,036	4,388	12.9	13.7	11,428	10,390	8.7	12.6
Virginia	4,149	2,580	15.6	15.3	9,157	6,865	11.7	13.9
West Virginia	4,310	2,572	18.5	20.4	4,310	2,572	18.5	20.4
Total	45,587	34,303	12.3	15.1	115,500	95,520	8.4	13.9

<sup>a/</sup> Source: U.S. Dept. of Commerce. 1951, 1961. U.S. Census of Agriculture: 1950, 1959. Bureau of the Census, Washington.

The percentage of commercial operators reporting these circumstances was higher in the Appalachians than in the 11 state area; however, as shown in Tables 10 and 11, the differences were small.

The variations among the Appalachian counties in the percentage of commercial farmers working off-farm 100 days or more and the percentage with other income greater than the farm sales are shown on supplementary maps.

### Regional Population Changes

Recent population changes within the Appalachian Region are shown in Table 12. Between 1950 and 1960, the population within the Region increased only 2.7 percent. During the same period the population of the 11 contiguous states and the United States increased 12.7 and 18.5 percent, respectively. Of the 11 state areas in the Region, two areas showed population declines. These two areas were West Virginia, where the population declined by 7.3 percent, and Kentucky, where a 15.1 percent decrease occurred.





Table 12. Population changes in states in the Appalachian Region, 1950 to 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state	
	Population, 1960	Percentage change, 1950 to 1959	Population, 1960	Percentage change, 1950 to 1960
	<u>thousand</u>		<u>thousand</u>	
Alabama	1,883	6.6	3,267	6.7
Georgia	378	7.1	3,943	14.5
Kentucky	875	-15.1	3,038	3.2
Maryland	196	3.2	3,101	32.3
North Carolina	777	2.0	4,556	12.2
New York	1,252	10.8	16,782	13.2
Ohio	1,599	9.7	9,706	22.1
Pennsylvania	7,159	4.1	11,319	7.8
Tennessee	1,599	5.1	3,567	8.4
Virginia	972	0.7	3,967	19.5
West Virginia	1,860	-7.3	1,860	-7.3
Total	18,550	2.7	65,107	12.7

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1961. U.S. Census of Population: 1960. Bureau of the Census, Washington.

<sup>b/</sup>The population in the United States increased 18.5 percent.

Population changes of individual counties are shown on supplementary maps. As shown on these maps, many counties throughout the Region had population losses from 1950 to 1960. In West Virginia, for example, only 15 of 55 counties had population increases during this time period. In most of these counties the increases were small. Jackson County had the largest relative gain with a 21.2 percent increase. In contrast, McDowell County had the largest relative loss with a 27.8 percent decrease.

The reasons for these changes are typical for many areas. A large manufacturing plant was established in Jackson County during the ten year period. This plant created numerous new jobs in the county which attracted workers from the surrounding area. In contrast, McDowell County suffered a large loss in the number of available jobs. In 1950, a majority of this county's labor force was employed in mining. From 1950 to 1960, the coal mining industry underwent considerable mechanization. As a result, McDowell County lost approximately 10,000 jobs in this industry alone.





As shown in Table 13, the percentage of the Appalachian population classified as rural decreased from 51 to 48 from 1950 to 1960. However, the rural population remained dominant in all Appalachian areas except the areas located in Alabama, Ohio and Pennsylvania. Furthermore, the Region was considerably more rural in 1960 than the 11 state area, where only approximately 33 percent of the population was rural, or the nation, where 30 percent was rural (Table 13). Furthermore, the decrease in the percentage of the population classified as rural was less in the Appalachians than in the contiguous states or in the United States.

Table 13. Percentage of the population classified as rural in states in the Appalachian Region, 1950 and 1960<sup>a</sup>

State	Area in the Appalachian Region		Entire state	
	Percentage classified as rural		Percentage classified as rural <sup>b</sup>	
	1950	1960	1950	1960
Alabama	36.5	30.6	56.2	45.2
Georgia	73.5	69.0	54.7	44.7
Kentucky	84.1	81.9	63.2	55.5
Maryland	55.5	54.7	31.0	27.3
North Carolina	78.9	77.0	66.3	60.5
New York	51.6	52.4	14.5	14.6
Ohio	49.6	46.9	29.8	26.6
Pennsylvania	36.5	36.4	29.5	28.4
Tennessee	62.1	57.2	55.9	47.7
Virginia	68.7	65.7	53.0	44.4
West Virginia	65.4	61.8	65.4	61.8
Total	51.0	48.4	37.1	32.8

<sup>a</sup>/Source: U. S. Dept. of Commerce. 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b</sup>Thirty-six and 30 percent of the population in the United States was classified as rural in 1950 and 1960, respectively.

In 1960, most of the Region's urban population lived in areas designated by the Budget as Standard Metropolitan Statistical Areas (SMSA).

In general, each SMSA must include at least one city with 50,000 or more inhabitants, or two cities having contiguous boundaries and constituting, for general economic and social purposes, a single community with a combined population of at least 50,000, the smaller of which must have a population of at least 15,000. In





addition to other metropolitan characteristics, at least 75 percent of the labor force of a county included in a SMSA must be in the nonagricultural labor force.

A complete and detailed definition of a SMSA is given on pages 3 through 5 of a 1961 Bureau of the Budget publication, Standard Metropolitan Statistical Areas.

Presented in Table 14 are the 23 Standard Metropolitan Statistical Areas located in the Appalachian Region. These 23 SMSA are composed of 40 counties and numerous cities and villages (also see supplementary map). Only cities having 25,000 or more inhabitants in 1960 are presented in Table 14.

As shown in Table 14, the combined population of the SMSA'S was 8,190,891. This amounted to 44.2 percent of the Region's total population and 91.2 percent of the Region's urban population.

The age of the population is important in determining the contribution of various numbers of the group. In a society characterized with a high degree of labor specialization, the young and the old make little contribution to the economic productivity of the group. When these groups start to make up a larger percentage of the population, the potential productive power of the labor force decreases.

From 1950 to 1960 the proportion of the population under 18 and over 65 years of age increased in most counties of the Region (see supplementary maps). In general, the increase was proportionally greater for the 65 and over age group compared to the younger group. This change in age composition has reduced the proportion of economically productive numbers of the population. Due to the lack of available jobs in many parts of the Region, many adults possessing some skills and training have migrated to areas where jobs are available.

#### **The Region's Labor Force**

From 1950 to 1960 the Region's civilian labor force increased only 1.6 percent .





Table 14. Standard Metropolitan Statistical Areas in the Appalachian Region, 1961<sup>1</sup>

AREA TITLE	1960 Population
<u>County</u>	
<u>City, 1960 population</u>	
<b>ALLENTOWN - BETHLEHEM - EASTON, PENNSYLVANIA</b>	428,948
<u>Lehigh County</u>	227,536
Allentown, 108,347	
Bethlehem, (part), 20,983	
<u>Northampton County</u>	201,412
Bethlehem, (part), 55,325	
Easton, 31,955	
<b>ALTOONA, PENNSYLVANIA</b>	137,270
<u>Blair County</u>	137,270
Altoona, 69,407	
<b>ASHEVILLE, N. C.</b>	130,074
<u>Funcombe County</u>	130,074
Asheville, 60,192	
<b>BINGHAMTON, NEW YORK</b>	212,661
<u>Broome County</u>	212,661
Binghamton, 75,941	
<b>BIRMINGHAM, ALABAMA</b>	634,864
<u>Jefferson County</u>	634,864
Bessemer, 33,054	
Birmingham, 340,887	
<b>CHARLESTON, WEST VIRGINIA</b>	252,925
<u>Kanawha County</u>	252,925
Charleston, 85,796	
<b>CHATTANOOGA, TENNESSEE - GEORGIA</b>	283,169
<u>Hamilton County (Tenn.)</u>	237,905
Chattanooga, 130,009	
<u>Walker County (Ga.)</u>	45,264
<b>ERIE, PENNSYLVANIA</b>	250,682
<u>Erie County</u>	250,682
Erie, 138,440	
<b>GADSDEN, ALABAMA</b>	96,980
<u>Etowah County</u>	96,980
Gadsden, 58,088	
<b>HARRISBURG, PENNSYLVANIA</b>	345,071
<u>Cumberland County</u>	124,816
<u>Dauphin County</u>	220,255
Harrisburg, 79,697	



Table 14 (continued)

AREA TITLE	1960 Population
<u>County</u>	
<u>City, 1960 population</u>	
<b>HUNTINGTON - ASHLAND, W. VA. - KY. - OHIO</b>	254,780
<u>Cabell County (W. Va.)</u>	103,202
Huntington (part), 77,740	
<u>Wayne County (W. Va.)</u>	38,977
Huntington (part), 5,887	
<u>Boyd County (Ky.)</u>	52,163
Ashland, 31,283	
<u>Lawrence County (Ohio)</u>	55,438
<b>HUNTSVILLE, ALABAMA</b>	117,348
<u>Madison County</u>	117,348
Huntsville, 72,365	
<b>JOHNSTOWN, PENNSYLVANIA</b>	280,733
<u>Cambria County</u>	203,283
Johnstown, 53,949	
<u>Somerset County</u>	77,450
<b>KNOXVILLE, TENNESSEE</b>	368,086
<u>Anderson County</u>	60,032
Oak Ridge, 27,124	
<u>Blount County</u>	57,525
<u>Knox County</u>	250,523
Knoxville, 111,827	
<b>PITTSBURGH, PENNSYLVANIA</b>	2,405,435
<u>Allegheny County</u>	1,628,587
McKeesport, 45,489	
Pittsburgh, 604,332	
West Mifflin, 27,269	
Wilkinsburg, 30,066	
<u>Beaver County</u>	206,948
Aliquippa, 26,369	
<u>Washington County</u>	217,271
<u>Westmoreland County</u>	352,629
<b>READING, PENNSYLVANIA</b>	275,414
<u>Berks County</u>	275,414
Reading, 98,177	
<b>ROANOKE, VIRGINIA</b>	158,803
<u>Roanoke County</u>	158,803
Roanoke, 97,110	
<b>SCRANTON, PENNSYLVANIA</b>	234,531
<u>Lackawanna County</u>	234,531
Scranton, 111,443	





Table 14 (continued)

Area Title	1960 Population
<u>County</u>	
<u>City, 1960 population</u>	
<b>STAMBUENVILLE - WEIRTON, OHIO - W. VA.</b>	167,756
<u>Jefferson County (Ohio)</u>	99,201
Staubenville, 32,495	
<u>Brooke County (W. Va.)</u>	28,940
Weirton (part), 4,133	
<u>Hancock County (W. Va.)</u>	39,615
Weirton (part), 24,063	
<b>TUSCALOOSA, ALABAMA</b>	109,047
<u>Tuscaloosa County</u>	109,047
Tuscaloosa, 63,370	
<b>WHEELING, WEST VIRGINIA - OHIO</b>	190,342
<u>Ohio County (W. Va.)</u>	68,437
Wheeling, 53,400	
<u>Marshall County (W. Va.)</u>	38,041
<u>Belmont County (Ohio)</u>	83,864
<b>WILKES - DARR - HAZLETON, PENNSYLVANIA</b>	346,972
<u>Luzerne County</u>	346,972
Hazleton, 32,056	
Wilkes-Barre, 63,551	
<b>YOUNGSTOWN - WARREN, OHIO</b>	509,006
<u>Mahoning County</u>	300,480
Youngstown (part), 166,631	
<u>Trumbull County</u>	208,526
Youngstown (part), 58	
Warren, 59,648	
<b>Total Population</b>	<b>8,190,691</b>

<sup>2/</sup> Source: Bureau of the Budget, 1961. Standard Metropolitan Statistical Areas, Office of Statistical Standards, U.S. Government Printing Office, Washington.

Compared to this relatively small increase, the labor force increased in the 11 state area 10 percent and the United States 15.4 percent (Table 15). In many Appalachian counties, the labor force contained less workers in 1960 than in 1950. In the Regional part of Kentucky, the labor force diminished by 25 percent. In West Virginia, it decreased by 11 percent. In the Regional part of Maryland, Ohio, Pennsylvania, and Virginia only modest gains were reported. The migration





Table 15. Percentage change in the civilian labor force in states in the Appalachian Region, 1950 to 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state	
	Civilian labor force, 1960 thousand workers	Percentage change, 1950 to 1960	Civilian labor force, 1960 thousand workers	Percentage change, 1950 to 1960
Alabama	618	8.8	1,130	5.0
Georgia	133	8.9	1,450	11.6
Kentucky	209	-25.0	996	0.5
Maryland	72	2.6	1,191	26.9
North Carolina	272	5.9	1,680	11.1
New York	489	8.8	6,952	10.0
Ohio	524	2.0	3,707	15.8
Pennsylvania	2,706	2.5	4,402	5.9
Tennessee	534	7.8	1,289	9.1
Virginia	320	3.1	1,400	17.0
West Virginia	587	-11.0	587	-11.0
Total	6,463	1.6	24,791	10.0

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b/</sup>The civilian labor in the United States increased 15.4 percent.

of workers from many areas is reflected in these negative and small positive increases in the civilian labor force.

There were significant changes in the percent of the labor force employed in the major industries from 1950 to 1960. Following are percentages of the civilian labor force employed in agriculture, forestry, and fisheries, mining, construction, and manufacturing in 1950 and in 1960.

As previously shown, the number of farms in the Appalachian Region decreased by approximately 37 percent from 1950 to 1960. This large reduction in farm numbers would necessarily cause a reduction in the number of workers engaged in agricultural work.

The percentage of the civilian labor force employed in agriculture, forestry, and fisheries in the Appalachians in 1950 and 1960 is presented in Table 16. Due to the small proportion of the civilian labor force employed in forestry and fisheries, workers employed in these industries were included with agricultural workers.





Table 16. Percent of the civilian labor force employed in agriculture, forestry, and fisheries in states in the Appalachian Region, 1950 and 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state	
	Percent employed		Percent employed <sup>b/</sup>	
	1950	1960	1950	1960
Alabama	21.2	7.7	23.6	9.3
Georgia	20.6	8.0	21.3	8.8
Kentucky	32.5	18.5	24.8	13.4
Maryland	7.5	5.0	6.3	3.3
North Carolina	25.9	11.6	24.0	12.4
New York	12.3	7.3	2.8	1.7
Ohio	11.0	5.5	6.7	3.5
Pennsylvania	4.7	2.9	4.0	2.5
Tennessee	20.7	10.3	21.0	10.3
Virginia	18.9	10.2	14.5	7.5
West Virginia	9.4	4.1	9.4	4.1
Total	12.0	6.0	9.9	5.0

<sup>a/</sup>Source: U.S. Dept. of Commerce, 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b/</sup>Twelve and 6.4 percent of the civilian labor force of the United States was employed in these industries in 1950 and 1960, respectively.

As shown in Table 16, the percentage of the civilian labor force employed in agriculture, forestry, and fisheries decreased from 12 percent in 1950 to 6 percent in 1960. During the same period, the percentage of the labor force employed in these industries in the 11 state area decreased from approximately 10 to 5 percent.

There was considerable variation in the change in the percentage of the civilian labor force employed in these industries in the counties of the Region (see supplementary maps). In general, larger relative decreases occurred in the southern portion of the Region.

Mining in the Appalachian Region has generally been recognized as one of its major industries. In the past, mining was considered a key element in the Region's economic growth. More recently, however, mechanization in this industry has lead to economic decline in the Region. Between 1950 and 1960 regional employment in the mining industry declined from approximately 478,000 to 203,000, a loss of 275,000 jobs.





Bituminous coal mining accounts for about 85 percent of the Region's total mineral industry employment. Other minerals mined are anthracite coal, limestone, mica, building sand and stone, oil, and gas.

The percent of the civilian labor force employed in mining in states in the Appalachian Region in 1950 and 1960 is shown in Table 17. Regional employment in mining as a percent of the total labor force decreased from 7.5 percent in 1950 to 3.1 percent in 1960. In 1950, employment in mining in West Virginia and in the Regional part of Kentucky made-up approximately one-fifth of the total labor force in these areas. In 1960, only 10 percent of West Virginia's labor force and about 13 percent of the Regional part of Kentucky's labor force was employed in mining. These changes represent a loss of approximately 75,000 jobs in West Virginia and 31,000 jobs in Kentucky.

Table 17. Percent of the civilian labor force employed in mining in states in the Appalachian Region, 1950 and 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state	
	Percent employed		Percent employed <sup>b/</sup>	
	1950	1960	1950	1960
Alabama	4.7	1.8	2.5	1.1
Georgia	1.2	1.1	0.4	0.4
Kentucky	20.6	12.8	7.0	3.8
Maryland	2.2	1.0	0.3	0.2
North Carolina	0.6	0.7	0.2	0.2
New York	0.5	0.4	0.1	0.2
Ohio	4.5	2.3	1.0	0.5
Pennsylvania	7.2	2.3	4.6	1.5
Tennessee	2.6	1.4	1.2	.7
Virginia	8.8	5.6	2.4	1.4
West Virginia	20.3	10.1	20.3	10.1
Total	7.5	3.1	2.3	1.0

<sup>a/</sup>Source: U.S. Dept. of Commerce. 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b/</sup>One and three-tenths and one percent of the civilian labor force of the United States was employed in mining in 1950 and 1960, respectively.





In terms of total employment, mining is not as important in the Regional part of the other Appalachian states as it is in Kentucky and West Virginia. However, in many Appalachian counties of other states, mining is very important. Employment in mining as a percent of the total labor force for counties is shown on supplementary maps.

The percentage of the civilian labor force employed in construction in states in the Appalachian Region in 1950 and 1960 is shown in Table 18. These data indicate about the same proportion of the labor force was employed in the construction industry in the Appalachians as was employed in the 11 state area and the United States. The percentage employed in individual counties in 1950 and 1960 is shown on supplementary maps.

Table 18. Percent of the civilian labor force employed in construction in states in the Appalachian Region, 1950 to 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state	
	Percent employed		Percent employed <sup>b/</sup>	
	1950	1960	1950	1960
Alabama	5.4	6.8	5.1	6.3
Georgia	4.9	6.1	5.5	6.0
Kentucky	4.6	6.1	5.4	6.0
Maryland	5.0	5.7	7.3	6.2
North Carolina	6.0	6.5	5.7	5.8
New York	5.8	5.3	4.9	4.6
Ohio	4.8	5.5	5.0	4.8
Pennsylvania	4.9	4.6	5.2	4.7
Tennessee	7.2	6.8	6.8	6.4
Virginia	6.8	6.7	6.9	6.5
West Virginia	4.9	5.0	4.9	5.0
Total	5.3	5.4	5.4	5.2

<sup>a/</sup> Sources: U.S. Dept. of Commerce. 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b/</sup> Five and eight-tenths and 5.6 percent of the civilian labor force of the United States was employed in construction in 1950 and 1960, respectively.





A common conception of the Appalachian Region is that it is predominantly an agricultural and mining area. However, in terms of employment, a larger percentage of the civilian labor force is employed in manufacturing than in agriculture and mining combined.

In 1950, 28.4 percent of the civilian labor force of the Region was employed in manufacturing. In 1960, 31.7 percent was so employed (Table 19). This change represents approximately 239,000 additional manufacturing jobs. Compared to this, 27.6 and 28.5 percent of the labor force of the 11 contiguous states and 24.7 and 28.7 percent of the labor force of the United States was employed in manufacturing in 1950 and 1960, respectively. Therefore, in terms of employment, manufacturing is more important in the Appalachian Region than in the 11 state area or in the United States.

Table 19. Percent of the civilian labor force employed in manufacturing in states in the Appalachian Region, 1950 to 1960<sup>a/</sup>

State	Area in the Appalachian Region		Entire state <sup>b/</sup>	
	Percent employed		Percent employed	
	1950	1960	1950	1960
Alabama	26.0	30.1	21.0	25.0
Georgia	38.9	43.2	22.3	25.1
Kentucky	8.3	13.7	15.3	19.9
Maryland	23.6	28.5	23.9	23.3
North Carolina	30.3	38.9	27.1	30.3
New York	30.0	32.1	28.2	27.1
Ohio	35.7	37.4	35.2	35.0
Pennsylvania	32.6	34.1	33.8	34.1
Tennessee	25.8	30.9	20.4	24.7
Virginia	21.3	26.3	19.8	21.4
West Virginia	18.0	21.4	18.0	21.4
Total	28.4	31.7	27.6	28.5

<sup>a/</sup> Source: U.S. Dept. of Commerce. 1952, 1961. U.S. Census of Population: 1950, 1960. Bureau of the Census, Washington.

<sup>b/</sup> Twenty-four and seven-tenths and 25.7 percent of the civilian labor force of the United States was employed in manufacturing in 1950 and 1960, respectively.





There was considerable variation among the Appalachian counties in the percent of the labor force employed in manufacturing (see supplementary maps). In general, manufacturing jobs composed a smaller proportion of the total number of jobs in the counties of Kentucky and West Virginia.

#### Some problems that have developed in the Appalachian Region

The cause of economic and social problems that have arisen in the Appalachian Region and problems that are likely to arise because of changes that have occurred probably cannot be pinpointed to a single change or cause. Most problems are the result of cumulative changes. On the other hand, many problems that exist, especially in agriculture, are the result of changes that have not occurred rather than changes that have occurred.

Many problems facing the agricultural sector of the Region can be attributed to changes that have not occurred. Even though some areas of the Region support efficient agricultural units, many of the Region's farms are of the subsistence type. In spite of the large decrease in farm numbers the gross cash receipts of most of the farms are still very low.

Appalachian agriculture remains a situation resulting from too many people dividing the returns from too few resources. Due to the scarcity of agricultural land and adverse weather conditions, there is little evidence that total agricultural income can be significantly expanded by new methods or enterprises. The limited resource, land, makes the efficient use of present machinery economically unfeasible. Farming is an activity associated with reduced cost per unit of output as total output increases. Since the Region's topography and weather conditions makes the realization of this condition highly unlikely, it seems the most serious agricultural problem is too many people dividing the limited income.

There is little reason to believe that the Region's total agricultural income would decrease if additional people left agriculture. In West Virginia, for example,





farm numbers decreased by 46 percent from 1930 to 1939. During the same period the value of agricultural products sold increased by approximately 21 percent. Some of this increase is due to an increase in prices. However, the main point is that total agricultural income did not decrease.

As previously shown, an increasing proportion of the Region's farmers are working off their farms. The number of nonagricultural jobs now available to the people of the Region falls short of the current labor force. This is shown by the high unemployment rate. Farmers desiring off-farm work may find it increasingly difficult to obtain a job.

Most of the nonagricultural problems and some problems facing the agricultural population are the result of changes which have occurred in the Region's economy. Many of these problems are the result of a cumulative process.

Most students of problems connected with underdevelopment and development have referred to a circular or cumulative process. As Myrdal<sup>4/</sup> points out, a change in the economy of a nation or a region leads to other changes. The first change is both the cause and effect of other changes. If this initial change is a negative change, subsequent changes will lead to other negative changes. The result will be a deterioration of economic and social conditions within the region or nation. On the other hand, should the initial change be a positive or favorable change, subsequent changes will lead to improved conditions within the region.

Myrdal also points out that there are no tendencies toward selfstabilization as assumed in the traditional equilibrium system.<sup>5/</sup> In the usual case, a change in the system does not create countervailing changes but supporting changes which tend

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<sup>4/</sup> Myrdal, Gunnar. 1957. Rich lands and poor. Harper & Brothers Publishers, p. 13.

<sup>5/</sup> Ibid.





to move the system in the same direction as the first change, but much farther. It is because of this circular action a social or economic process tends to become cumulative.

According to this theory there are changes which can stop and stabilize this process. These changes are not, however, a natural outcome of forces endogenous to the system. Both favorable and unfavorable forces can be acting within the system simultaneously. These forces can cancel each other and bring the system to a halt. Myrdal further states that this position is unstable and any new exogenous change will again start a new cumulative process away from the position of rest in the direction of the new change.<sup>6/</sup>

It seems this theory is applicable to many changes that have occurred in the Appalachian Region. The large decrease in the number of workers employed in the coal mining industry and the subsequent migration of these workers and their families has created many economic and social problems. Mechanization in the coal mining industry, not a decrease in the total amount of coal mined, has been the cause of the unemployment. Unemployment in steel and other major industries has also led to serious problems. However, unemployment in the major mining centers has caused greater problems because of the lack of other sources of employment.

Large scale unemployment has first, second, third, and additional round effects on the area inflicted. The long-run changes are the cumulative results of the short-run changes.

The first round or primary effect of unemployment was, of course, workers became unemployed. This, in turn, decreased incomes and demand in the area inflicted. The reduction in incomes and demand lowered incomes and caused unemployment in the service industries that served the inflicted area.

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<sup>6/</sup>Ibid.





As the process continued, the inflicted areas became less attractive for businesses and workers in the area and many moved from the inflicted areas to areas offering better markets for their resources. When this move occurred, incomes and demand decreased again. It is reasonable to expect that the migrants were attracted to areas where economic activity was expanding. The expanding areas may have been urban centers within the Region or areas outside the Region. According to most migration studies, migration is almost always selective in terms of age and training of the migrant. In respect to age, our data show there has been an increase in the proportion of dependent persons in the Region's population.

This population shift has obviously had some effect on the quality of education, roads, and other public facilities the inflicted areas are able to maintain. The quality of public facilities an area is able to maintain depends largely on the amount of taxes the local government is able to collect. Although a large proportion of the total amount spent on many local facilities comes from federal sources, the local government must, in most cases, have matching funds in order to obtain the outside funds. The reduced incomes and demand and the subsequent migration will necessarily reduce the amount of taxes collected.

Faced with a diminishing tax fund, the local government seems to have at least two possible alternatives. If the local government desires to maintain adequate schools, hospitals, and other facilities, the tax rate will have to be increased. However, the higher tax rate may have serious repercussions. It may influence other workers to leave the area and also keep some industry from entering the area. The additional migration will again decrease demand and incomes.

A second alternative is to let the tax rate remain fairly constant and let the standards of the various public services become lower. It seems this alternative is the one taken in most areas hard hit by population losses. In most cases,





the quality of schools, hospitals, roads, water and sewage facilities, and local government has deteriorated. The physical appearance of homes, stores, and public buildings also tends to deteriorate.

It appears that this has happened in many areas of the Appalachian Region. The loss of incomes and demand through loss of employment and subsequent migration has resulted in poor public facilities and an unfavorable age distribution. The poor public facilities and the poor physical appearance of many inflicted areas tends to discourage industry from establishing in the area.

The problems of unfavorable age distributions, loss of incomes and demand, and the inability to maintain adequate public facilities are present in many communities in the Region. In addition, in many areas agriculture is faced with the problem of having too many people dividing the returns from too few resources.











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